

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claim 1. (Original) A stacked photovoltaic element comprising a plurality of unit photovoltaic elements each composed of a pn- or pin-junction, connected to each other in series, wherein a zinc oxide layer is provided at least one position between the unit photovoltaic elements, and the zinc oxide layer has resistivity varying in a thickness direction thereof.

Claim 2. (Original) The stacked photovoltaic element according to Claim 1, wherein zinc oxide of the zinc oxide layer on a side of being in contact with a p-layer of the pn- or pin-junction has a higher resistivity than that on a side of being in contact with an n-layer of the pn- or pin-junction.

Claim 3. (Original) The stacked photovoltaic element according to Claim 2, wherein a resistivity of the zinc oxide continuously decreases in the zinc oxide layer from a side of the zinc oxide layer in contact with the p-layer towards a side of the zinc oxide layer in contact with the n-layer.

Claim 4. (Original) The stacked photovoltaic element according to Claim 1, wherein a resistivity of zinc oxide of the zinc oxide layer is 2100 $\mu\Omega\text{cm}$ or more but 5103 $\mu\Omega\text{cm}$ or

less.

Claim 5. (Original) The stacked photovoltaic element according to Claim 1, wherein a high resistant portion of zinc oxide of the zinc oxide layer has 5102 μcm or more but 5103 μcm or less.

Claim 6. (Original) The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of amorphous Si:H.

Claim 7. (Original) The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of microcrystalline Si.

Claim 8. (Original) The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of single-crystalline or poly-crystalline Si.

Claims 9 - 11. (Canceled)

Claim 12. (Currently Amended) A method for producing a stacked photovoltaic element comprising an intermediate layer between photovoltaic elements each

having a pn- or pin-junction, comprising the steps of:

stacking a first layer mainly composed of indium oxide on at least one interface with the photovoltaic element; and

stacking a second layer mainly composed of zinc oxide on the first layer to form the intermediate layer The method according to Claim 9 for producing a stacked photovoltaic element, wherein the second layer is formed at a rate higher than that of the first layer.

Claim 13. (Currently Amended) A method for producing a stacked photovoltaic element comprising an intermediate layer between photovoltaic elements each having a pn- or pin-junction, comprising the steps of:

stacking a first layer mainly composed of indium oxide on at least one interface with the photovoltaic element; and

stacking a second layer mainly composed of zinc oxide on the first layer to form the intermediate layer The method according to Claim 9 for producing a stacked photovoltaic element, wherein the second layer is formed at a temperature lower than that of the first layer.

Claim 14. (Original) A stacked photovoltaic element comprising an intermediate layer between photovoltaic elements each having a pn- or pin-junction, wherein the intermediate layer comprises a first layer and a second layer stacked in this order on at least one interface with a photovoltaic element, the first layer being mainly composed of indium oxide and

the second layer being mainly composed of zinc oxide.

Claim 15. (Original) The stacked photovoltaic element according to Claim 14, wherein the second layer is thicker than the first layer.

Claim 16. (Original) The stacked photovoltaic element according to Claim 14, wherein the first layer has a thickness of 1 nm or more but 50 nm or less.

Claim 17. (Original) The stacked photovoltaic element according to Claim 14, wherein the second layer has a higher transmittance than the first layer at a wavelength of 800 nm.